

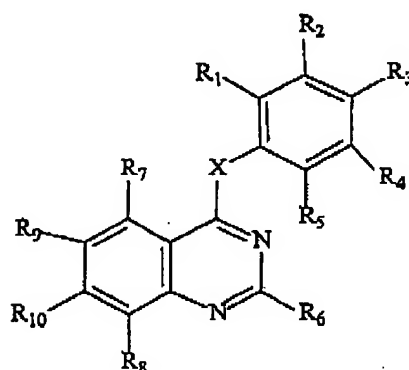
Application Serial No. 10/715,773
Preliminary Amendment dated September 16, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Original) A compound of formula I:



wherein:

X is HN, $R_{11}N$, S, O, CH_2 , or $R_{11}CH$;

R_{11} is hydrogen, (C₁-C₄)alkyl, or (C₁-C₄)alkanoyl;

R_1 - R_8 are each independently hydrogen, hydroxy, mercapto, amino, nitro, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, or halo; wherein two adjacent groups of R_1 - R_5 together with the phenyl ring to which they are attached may optionally form a fused ring, for example forming a naphthyl or a tetrahydronaphthyl ring; and further wherein the ring formed by the two adjacent groups of R_1 - R_5 may optionally be substituted by 1, 2, 3, or 4 hydroxy, mercapto, amino, nitro, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, or halo; and

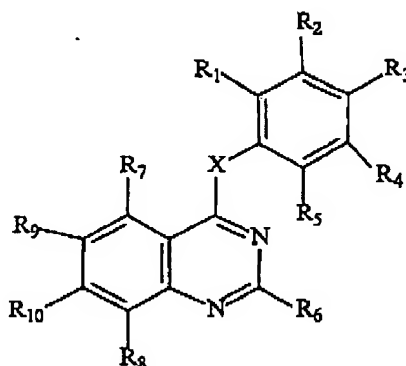
R_9 and R_{10} are each independently hydrogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, halo, or (C₁-C₄)alkanoyl; or R_9 and R_{10} together are methylenedioxy; or a pharmaceutically acceptable salt thereof;

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provided the compound is not 4-(4'-hydroxyl-phenyl)-amino-6,7-dimethoxyquinazoline.

2-12. (Canceled)

13. (Original) A pharmaceutical composition comprising a compound of formula I:



wherein:

X is HN, R₁₁N, S, O, CH₂, or R₁₁CH;

R₁₁ is hydrogen, (C₁-C₄)alkyl, or (C₁-C₄)alkanoyl;

R₁-R₈ are each independently hydrogen, hydroxy, mercapto, amino, nitro, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, or halo; wherein two adjacent groups of R₁-R₅ together with the phenyl ring to which they are attached may optionally form a fused ring, for example forming a naphthyl or a tetrahydronaphthyl ring; and further wherein the ring formed by the two adjacent groups of R₁-R₅ may optionally be substituted by 1, 2, 3, or 4 hydroxy, mercapto, amino, nitro, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, (C₁-C₄)alkylthio, or halo; and R₉ and R₁₀ are each independently hydrogen, (C₁-C₄)alkyl, (C₁-C₄)alkoxy, halo, or (C₁-C₄)alkanoyl; or R₉ and R₁₀ together are methylenedioxy; or a pharmaceutically acceptable salt thereof; and a pharmaceutically acceptable carrier.

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14-16. (Canceled)

17. (Original) A pharmaceutical composition comprising 4-(4'-hydroxyl-phenyl)-amino-6,7-dimethoxyquinazoline; or a pharmaceutically acceptable salt thereof; and a pharmaceutically acceptable carrier.

18. (Original) A therapeutic method for treating leukemia or lymphoma in a mammal comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

19. (Canceled)

20. (Original) A therapeutic method for preventing or reducing ultraviolet B radiation-induced inflammatory response in a mammal comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

21. (Original) A therapeutic method for inhibiting the release of prostaglandin E₂ in a mammal comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

22. (Original) A therapeutic method for preventing or reducing UVB-induced skin edema or vascular permeability changes in a mammal comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

23. (Original) A therapeutic method for preventing or reducing ultraviolet B radiation-induced damage to epithelial cells or mutation frequency in skin in a mammal comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

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24. (Original) A therapeutic method for protecting a mammal from tumorigenic effects of UVB light comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

25. (Original) A therapeutic method for inhibiting T-cell activity in a mammal comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

26. (Original) A therapeutic method for preventing or treating an autoimmune disease comprising administering to the mammal in need thereof an effective amount of a JAK-3 inhibitor.

27-29. (Canceled)

30. (New) A method of treating graft versus host disease comprising administering a JAK-3 inhibitor.

31. (New) The method of claim 30, wherein the JAK-3 inhibitor has molecular dimensions compatible with the shape of a JAK-3 kinase binding pocket model and occupies a molecular volume of less than about 530 \AA^3 .

32. (New) The method of claim 31, wherein the molecular volume is about 252 \AA^3 to about 307 \AA^3 .

33. (New) The method of claim 32, wherein the JAK-3 inhibitor has an estimated K_i of less than about 2.3 \mu M as measured by inhibition of JAK-3-induced cell growth.

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34. (New) The method of claim 33, wherein the estimated K_i is of about 0.6 μM to about 2.3 μM .

35. (New) The method of claim 31, wherein said JAK-3 inhibitor has the following molecular features:

- a) a relatively planar molecular shape;
- b) an ability to fit the 530 \AA^3 binding pocket volume; and
- c) a hydroxyl group capable of interacting with Asp 967 of the binding pocket.

36. (New) The method of claim 35, wherein said JAK-3 inhibitor further comprises:

- d) a hydrogen bond acceptor or a hydrogen bond donor capable of interacting with Leu 905 of the binding pocket.

37. (New) A method of treating host rejection of a donor organ transplant comprising administering to the host a JAK-3 inhibitor.

38. (New) The method of claim 37, wherein the JAK-3 inhibitor has molecular dimensions compatible with the shape of a JAK-3 kinase binding pocket model and occupies a molecular volume of less than about 530 \AA^3 .

39. (New) The method of claim 38, wherein the molecular volume is about 252 \AA^3 to about 307 \AA^3 .

40. (New) The method of claim 39, wherein the JAK-3 inhibitor has an estimated K_i of less than about 2.3 μM as measured by inhibition of JAK-3 positive Leukemia cell growth.

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41. (New) The method of claim 40, wherein the estimated K_i is of about 0.6 μM to about 2.3 μM .

42. (New) The method of claim 38, wherein said JAK-3 inhibitor has the following molecular features:

- a) a relatively planar molecular shape,
- b) an ability to fit into the 530 \AA^3 binding pocket volume, and
- c) a hydroxyl group capable of interacting with Asp 967 of the binding pocket.

43. (New) The method of claim 42, wherein said JAK-3 inhibitor further comprises:

- d) a hydrogen bond acceptor or a hydrogen bond donor capable of interacting with Leu 905.